APPENDIX A - SECTION 404(B) EVALUATION

SECTION 404(b) EVALUATION

MANATEE HARBOR
MANATEE COUNTY, FLORIDA
NAVIGATION STUDY

I. Project Description

a. Location. Manatee Harbor is located within the southern portion of the Tampa Bay Estuary in Manatee County, Florida, just south of the Hillsborough County line. Tampa Bay is situated midway along the west coast of Florida. Refer to location map, figure 1, in the Environmental Assessment (EA).

b. General Description. The recommended plan would include enlarging the turn wideners and creating a 900-ft. diameter turning basin. All features proposed would be considered for dredging to a maximum depth of – 40 ft (m.l.l.w).

c. Authority and Purpose. The navigation project for Manatee Harbor, Florida, was authorized by the 1986 Water Resources Development Act (PL 99-662), dated 17 November 1986.

d. General Description of Dredged or Fill Material.

(1) General Characteristics of Material. Based on core borings, material from widening the channel would include fine to medium sand, quartz, and clay depending on the depth of excavation and exact location. Material from the proposed turning basin would be similar to the entrance channel but includes hard dense limestone and limestone fractured with voids filled with clay.

(2) Quantity of Material. Total cubic yards from the separate features include: Channel Wideners, 1,525,000; Turning Basin, 2,000,000.

(3) Source of Material. Material would be removed from the proposed Manatee Harbor turning basin, turn wideners, and side channel extension.

e. Description of the proposed Discharge Site.

(1) Location. The Manatee County Port Authority, local sponsor for the project, has an existing approved upland diked dredged material disposal facility on Port property. This site has been used previously for maintenance dredging of the Port Manatee access channel. The Port Authority may upgrade the existing dikes around a portion of this disposal site. The disposal area is approximately 95 acres.

(2) Size. The existing port upland disposal site is approximately 95-acres.

(3) Type of Site. The Port's site is a dry upland with sandy soil interspersed with layers of clay. Infiltration rates are low. This site has been used previously for maintenance dredging of the Port Manatee access channel.

(4) Type of Habitat. The discharge site is an upland area.

(5) Timing and Duration of Discharge. Disposal time would be determined by construction scheduling, and is not now determined.

f. Description of Disposal Method. Dredged material would be hydraulically pumped to the disposal site. The return water from the disposal site returns to Tampa Bay.

II. Factual Determinations

a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Dikes are raised with side slopes of 1V : 4H. Footprint is to outer toe of dike at an elevation of approximately 6-feet.

(2) Sediment Type. Based on core borings, material from widening the channel would include fine to medium sand, quartz, and clay depending on the depth of excavation and exact location. Material from the proposed turning basin would be similar to the entrance channel but include hard dense limestone and limestone fractured with voids filled with clay. Excavation of the new channel expects to produce mainly silt with traces of sand and shell.

(3) Dredge/Fill Material Movement. The dredged material would be placed and contained in the upland disposal site. Dredge material movement would not be a factor.

(4) Physical Effects on Benthos. There would be no physical effects on benthos.

b. Water Circulation, Fluctuation and Salinity Determination.

(1) Water Column Effects. There would be no effect to the water column.

(2) Current Patterns and Circulation. There would be no effect to current patterns and circulation.

(3) Normal Water Level Fluctuations and Salinity Gradients. No change expected.

c. Suspended Particulate/Turbidity Determinations.

(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site. None expected.

(2) Effects on the Chemical and Physical Properties of the Water Column.

(a) Light Penetration. Light penetration will decrease during discharge in the immediate area where dredge material is being deposited. This effect will be temporary and will have no adverse impact on the environment.

(b) Dissolved Oxygen. Dissolved oxygen levels would not be altered by this project.

(c) Toxic Metals, Organics, and Pathogens. No toxic metals, organics, or pathogens would be released by the project.

(d) Aesthetics. There are no issues concerning aesthetic matters. Dredged material has an odor of decaying matter, and the silty material may be carried over the dikes by winds.

(3) Effects on Biota.

(a) Primary Productivity and Photosynthesis. There would be no effect on the bay productivity as a result of the proposed upland disposal.

(b) Suspension/Filter Feeders. There would be no long-term adverse impact to suspension/filter feeders.

(c) Sight Feeders. There would be no long-term adverse impact to sight feeders.

d. Contaminant Determinations. Deposited dredge material would not introduce, relocate, or increase contaminants.

e. Aquatic Ecosystem and Organism Determinations.

(1) Effects on Plankton. None expected.

(2) Effects on Benthos. None expected.

(3) Effects on Nekton. None expected.

(4) Effects on the Aquatic Food Web. Seagrasses are important in food webs. Approximately 4.75 acres of shallow bay bottom supporting seagrasses would be removed and transplanted in a nearby location.

(5) Effects on Special Aquatic Sites.

(a) Hardground and Coral Reef Communities. Approximately 0.88 acres of low relief, low quality hardground would be impacted.

(b) Sanctuaries and Refuges. None

(c) Wetlands. None expected.

(d) Mud Flats. None expected.

(e) Vegetated Shallows. None expected.

(f) Riffle and Pool Complexes. None

(6) Endangered and Threatened Species. There would be no impacts expected on any threatened or endangered species. Manatee protection measures as specified by the USFWS would be followed to minimize potential harm.

(7) Other Wildlife. None expected.

(8) Actions to Minimize Impacts. Manatee protection measures as specified by the USFWS would be followed to minimize potential harm.

f. Proposed Disposal Site Determinations.

(1) Mixing Zone Determination. No adverse impact related to depth, current velocity, direction and variability, degree of turbulence, stratification, or ambient concentrations of constituents are expected from implementation of the project.

(2) Determination of Compliance with Applicable Water Quality Standards. State water quality standards will not be violated.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supplies. No municipal or private water supplies will be impacted by the implementation of the project.

(b) Recreational and Commercial Fisheries. Recreation and commercial fisheries would not be impacted by disposal of dredged material.

(c) Water Related Recreation. No effect.

(d) Aesthetics. The aesthetic resources at Manatee Harbor are limited. The proposed work would not adversely affect aesthetic resources at the port facility. Aesthetic resources in the general area of Tampa Bay would be temporarily impacted by the presence of the dredge and other construction equipment.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. No effect.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. There would be no cumulative impacts that result in a major impairment of water quality of the existing aquatic ecosystem as a result of placement of dredge material at the disposal sites.

h. Determination of Secondary Effects on the Aquatic Ecosystem. There would be no secondary effects on the Aquatic Ecosystem as a result of placement of dredge material at the disposal site.

III. Findings of Compliance or Non-compliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

c. After consideration of disposal site dilution and dispersion, the discharge of fill materials would not cause or contribute to, violations of any applicable State water quality standards for Class III waters. The discharge

operation will not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

d. The Manatee Harbor dredging project would not jeopardize the continued existence of any species listed as threatened or endangered or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973, as amended.

e. The placement of fill material would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic species and other wildlife would not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values would not occur.

f. On the basis of the guidelines, the proposed disposal site for the discharge of dredged material is specified as complying with the requirements of these guidelines.